

1 1. A spinal needle comprising:

2 an elongated, hollow needle having a lumen, said lumen
3 having a first cross sectional area;

4 a modified pencil-like point on a distal end of said
5 elongated, hollow needle;

6 a rounded shoulder circumscribing said elongated, hollow
7 needle at the juncture of said modified pencil-like point and
8 said elongated, hollow needle; and

9 a side port in said elongated, hollow needle, said side
10 port being located adjacent said rounded shoulder and having
11 a second cross sectional area, said second cross sectional
12 area being equal to or incrementally larger than said first
13 cross sectional area of said lumen of said elongated, hollow
14 needle.

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16 2. The spinal needle defined in claim 1 wherein said
17 elongated, hollow needle is selected from gauge size selected from
18 the group consisting of a gauge size between 20 gauge to 26 gauge.

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20 3. The spinal needle defined in claim 1 wherein said second
21 cross sectional area of said side port is determined by the formula
22 $L \times W$ and which is equal to or greater than said first cross
23 sectional area which is determined by the formula $\frac{\pi D^2}{4}$.

1 4. The spinal needle defined in claim 3 wherein said length
2 is less than 1.5 times said diameter of said lumen.

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4 5. The spinal needle defined in claim 1 wherein said side
5 port comprises a first edge adjacent said rounded shoulder and said
6 first edge is located at a distance from said modified, pencil-like
7 point equal to or less than 1.5 times the external diameter of said
8 elongated, hollow needle.

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10 6. The spinal needle defined in claim 5 wherein said side
11 port incrementally modifies the external profile of said elongated,
12 hollow needle adjacent said rounded shoulder.

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14 7. The spinal needle defined in claim 6 wherein said side
15 port reduces a moment arm between said modified, pencil-like point
16 and said side port by said side port being located adjacent said
17 rounded shoulder.

1 8. A spinal needle comprising:
2 an elongated, hollow needle;
3 a lumen in said elongated, hollow needle, said lumen
4 having a first cross sectional area;
5 a modified, pencil-like point on one end of said
6 elongated, hollow needle;
7 a rounded shoulder on said elongated, hollow needle at
8 the juncture of said modified pencil-like point with said
9 elongated, hollow-needle;
10 a side port through a sidewall of said elongated, hollow
11 needle, said side port providing fluid communication through
12 said sidewall between said lumen and the exterior of said
13 elongated, hollow needle, said side port having a second cross
14 sectional area, said second cross sectional area being equal
15 to or incrementally larger than said first cross sectional
16 area; and
17 a reduced moment arm for reduced breakage of said
18 elongated, hollow needle, said reduced moment arm comprising
19 said side port being located adjacent said rounded shoulder.

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21 9. The spinal needle defined in claim 8 wherein said side
22 port includes a leading edge adjacent said rounded shoulder and
23 said reduced moment arm is held to less than 1.5 times the external
24 diameter of said elongated, hollow needle, said moment arm being
25 measured by the distance between said leading edge and the end of
26 said modified, pencil-like point.

1 10. The spinal needle defined in claim 8 wherein said side
2 port is cut through said side wall and thereby modifies the
3 external profile of said elongated, hollow needle adjacent said
4 rounded shoulder.

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6 11. The spinal needle defined in claim 8 wherein said side
7 port has a length less than 1.5 times the diameter of said lumen.

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1 12. A method for delivering a spinal anesthesia comprising
2 the steps of:

3 obtaining an elongated spinal needle, said spinal needle
4 having a hollow lumen having an internal diameter and a first
5 cross sectional area;

6 forming a modified, pencil-like point on a distal end of
7 said elongated spinal needle;

8 shaping a rounded shoulder on said elongated spinal
9 needle at the juncture of said modified, pencil-like point
10 with said elongated spinal needle;

11 preparing a side port through a side wall of said
12 elongated hollow needle between said lumen and the ambient;

13 said side port having a second cross sectional area;

14 said second cross sectional area being equal to or
15 incrementally greater than said first cross sectional area of
16 said lumen; and

17 passing said spinal anesthesia through said lumen of said
18 elongated spinal needle and directing said spinal anesthesia
19 through said side port.

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21 13. The method defined in claim 12 wherein said shaping step
22 includes atraumatically parting the dura with said rounded shoulder
23 by gradually stretching fibers in the dura and gradually releasing
24 said fibers upon withdrawal of said elongated spinal needle.

1 14. The method defined in claim 12 wherein said preparing
2 step includes placing said side port adjacent said rounded
3 shoulder.

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5 15. The method defined in claim 14 wherein said preparing
6 step includes forming a leading edge on said side port, said
7 leading edge being closest to said rounded shoulder, said leading
8 edge being less than 1.5 times the external diameter of said
9 elongated spinal needle from the tip of said modified, pencil-like
10 point thereby reducing a moment arm on said elongated spinal
11 needle.

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